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ABSTRACT

The movement within behavior therapy to introduce cognitive terms, constructs, and techniques reflects and involves an extension of the pervasive cognitive movement within the experimental field and the long-standing cognitive approach of many clinicians. Modern day attacks on behaviorism by cognitivists have been almost exclusively geared to the radical behaviorism of J. B. Watson and B. F. Skinner. Rarely are the advances in neobehaviorism addressed. The criticisms may be grouped within the following categories: anti-scientific analysis; anti-radical environmentalism and determinism; the argument that the human is unique and separate; an attack within the laboratory on the role of behavior; and cognitive psychology as a weapon of propaganda. What is at stake is the development of an orderly accumulation of knowledge with theoretical models formulated in a precise and testable manner with the development of operational clinical procedures that can determine the behavioral change-agent. Systematic desensitization and implosive therapy are two approaches that meet this challenge. To achieve the objective of determining the laws associated with psychopathology there must be a return to the foundation built by the founding fathers of behavior therapy. Cognitive therapy and the cognitive movement as they are known today will die as all fads do for lack of substance. So will behavior therapy, as it is known today, unless the revolutionary goals originally outlined are executed. (LLL)

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Behaviorism and Cognitivism in Behavior Therapy

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In 1970 I entitled one of my articles "Behavioral Therapy: The Fourth Therapeutic Revolution?" (following Pinel, Freud and community mental health movement). At that point in time, behavior therapy was gaining impetus as a movement, representing the only clinical psychotherapy approach in the history of our field to align itself with the basic research areas of psychology. The uniqueness of this new approach revolved around its attempt to extrapolate established laboratory theory, principles, and laws to a clinical field that was in a state of disarray. At that time there was over a 100 divergent therapeutic approaches operating in the absence of a cohesive theoretical base and guiding philosophy of science. The behavioral therapy movement, armed with a philosophy of science of the experimental laboratory that stressed the use of operational procedures and terms enhanced by the adaption of a S-R language, combined with a strong commitment to assessment and research, showed great promise in bringing the clinical field out of the dark ages. The ailment of the behavioral therapy movement to the experimental learning area of psychology produced a strong foundation upon which to build. However, disturbing signs existed at the time I wrote the article which prompted me to end my title with a question mark. Although the foundation of the movement was solid, signs of faulty construction in building the behavioral house were becoming apparent. Too many of the new recruits which aligned themselves with the movement displayed limited knowledge of the learning literature and the philosophy of science upon which it was based. Too many of the new leaders in the behavior therapy movement seemed more concerned with enhancement of their own careers than in fostering scientific knowledge. As the movement became popular, cognitive therapeutic approaches outside the movement redefined themselves as behavioral (e.g., the approaches of Beck and Ellis). The "bandwagon effect" brought in more new blood, untrained or unsympathetic to the principles of behaviorism. Cognitive theories and techniques preceded by the prefix behavioral were introduced in abundance resulting in constant redesigns of how the house should be built. These new designs deviated greatly from the blue-print outlined by the founding fathers. Disturbed by the ongoing changes to the original developers of the movement (Wolpe, Skinner, Eysenck, Stampfl, Agras, Franks, Krasner, and others) addressed their concern repeatedly but to no avail.

Today the behavioral movement has mushroomed to the point where numerous journals, books, workshops and societies are devoted to the topic of behavior therapy. Research articles abound and new techniques flourish but the field in its development

has broadened to the point that it's current eclectic motive questions, too frequently, the appropriateness of the term behavior. Given the current state of affairs it is very possible that historians will view behavior therapy as one of those many passing, fashionable fads. This possibility was recently highlighted by Stewart Agras, in his 1986 AABT presidential address:

> "In the past few years, despite the ever strengthening evidence for the efficacy of behavioral treatments, and the widening applications of such therapies, a theme of discontent has been sounded in the writing of many experts in the field. Krasner (1985) in his review of the thousand page "International Handbook of Behavior Modification and Therapy" asks where do we go from here? This handbook brings to a focus the crisis in the behavior modification field. It has lost its initial unity and theoretical cohesion. There is no coherent overall picture of the field or where it is going. I have no specific recommendations to remedy the situation other than to call attention to the obvious and to suggest that we all focus some attention on these major problems of the behavioral movement, overload and fractionization" (Agras, 1987, p. 203).

I plan in this paper to outline the reasons for the overload and fractionalization within behavior therapy as well as to make some specific recommendations designed to provide a remedy.

In a sense the movement within behavior therapy to introduce cognitive terms, constructs, and techniques should be of no great surprise. It simply reflects and involves an extension of the pervasive cognitive movement within the experimental field and the long standing cognitive approach of many clinicians. The shift in emphasis, stimulated in part by the advent of the small computers, represents a movement away from the study of lower-level learning phenomena, which was primarily the subject matter of interest to S-R psychologists of the 1930s, 40s, and 50s, to more complex human behavior especially that dealing with language. It should be made clear from the outset that cognitive psychology does not refer to a coherent theory but to areas of research - attention, perception, language, memory, imagery and problem-solving. These topic areas of cognitive psychology have been of interest to both early and contemporary behaviorists with a number of behavioral theories incorporating them into their

framework (e.g., Hull, 1937; Spence, 1966). The issue at hand is not the validity of these areas of study, but rather the value of current day cognitive theory and explanation in a quest for discovery of new knowledge and laws.

Modern day cognitive theory created a new language which attracted a number of new recruits which spread like a wild-fire out of control consuming everything around it. The resulting band-wagon effect split experimental psychology between neuroscience and cognitive (information) science eliminating the previous coherence within the field.

The above developments prompted Skinner to say "I think cognitive psychology is a hoax and a fraud, and that goes for brain science too." But before we start the name calling part of this debate let us review some history to better understand the basic issues at hand. The principles and laws of learning extrapolated by the founding fathers of the behavior therapy movement represented an outgrowth of some 50 years of development by experimental psychologists. This approach largely represented the underlying philosophy of S-R behaviorism, whose origins can be traced to Watson's influential impact. Behaviorism defined the study of psychology as the study of behavior via a reasonable and pragmatic level of objectivity and verifiability. Behavioral psychology from Watson's viewpoint put the field squarely in the camp of other natural sciences whose differences among disciplines was only necessitated by a division of labor. Watson anticipated the main premise in Pratt's (1939) The Logic of Modern Psychology which was an obvious extension to psychology of Bridgman's book The Logic of Modern Physics (1927). Bridgman promoted the "operational character of concepts as a way of dealing with the more relative nature of knowledge in the move from Newtonian to Einsteinian physics. The additional works of Bergman and Spence, Feigl and others during the 1930s and 40s outlined the necessary philosophy of science required to move psychology away from the field of philosophy and away from the structuralist and introspectionist who wanted to study the inner workings of the mind composed of private events. Science requires events to be public, verifiable and objective. Watson redirected psychology via a functional analysis of behavior.

Some 70 years later we have a return of the structuralist and introspectionist cloaked in modern day cognitive therapy. Their attacks on behaviorism failed to recognize that there is at least three distinct versions of behaviorism. The first to be discussed referred to as radical behaviorism, has its seminal origins in Watson's Behaviorism (1925, 1930) where he became an arch-environmentalist discarding

instincts and down playing heredity. As Bergmann, an astute historian and philosopher of science, wrote in 1956 "Watson had an amazingly naive and almost superstitious distrust of any appeal to the action of the central nervous system." (p. 273). Bergmann was referring to Watson's radical behavioral position reflects in his 1925/1930 writings. Skinner in his 1950 paper "Are theories of learning necessary" adopted a purely inductive S-R position reflecting and environmental behaviorism somewhat similar to Watson's 1925/1930 position. Although it should be noted that Skinner (1959) judged Watson's views in Psychology from the Standpoint of a Behaviorist (1919) as his most important work.

A second type of behaviorism referred to as S-R neobehaviorism has its seminal origins in Watson's earlier (1913/1919) statements. During this period Watson addressed topics covered by other textbooks of his time including methods for investigating the various sense organs, the motor systems, emotions, instincts, habits, thinking and memory. But most importantly, he omitted terms and language connoting mentalism. His functional emphasis on "genetic psychology" is a strong feature during this period resulting in his famous experiment with Rayner (1920). This study can be regarded as the cradle of conditioning and behavior therapies. The neobehavioral positions of the 1940s and 50s reflected in the writing of Hull-Spence, Miller, Mowrer and others are distinguished by their emphasis on providing a stimulus-response analysis of theoretical constructs like anxiety, purpose, and anticipation and their focus on habit, unlearned S-R connections, adaptiveness and physiology. The S-R theoretical models offered reflected a commitment to guard against subjectiveism and anthropomorphism and is most like 1913/1919 Watson. In the same vein so in pre-1950 Skinner especially in his 1938 book Behavior of the Organism.

The final brand of behaviorism to be discussed will be referred to as S-S or cognitive neobehaviorism whose seminal origins developed from Tolman's purposive or molar behaviorism of the 1920s and 1930s developing into his operational behaviorism of the 1930s and 1940s. Tolman's approach was also close to the 1913/1919 Watson except for the mentalistic flavor of his intermediate constructs. For Tolman's mental processes were conceived as useful dynamic aspects or determinants, of behavior keeping in tact, the behavioral premise that the study of psychology to remain objective and scientific must focus on behavior.

Attacks on Behaviorism

Modern day attacks on behaviorism by cognitivists have been almost exclusively geared to radical behaviorism of Watson's 1925/1930 period and Skinner post-1950. Rarely are the advances made in neobehaviorism addressed. The criticisms offered can be grouped as follows:

(1) Anti-scientific analysis. This type of criticism comes primarily from humanists. For example, Carl Rogers in his 1964 book Behaviorism and Phenomenology opposes laboratory psychology and the idea that science can be impersonal. And Arthur Koestler, in his The Act of Creation (1964) questions whether a science of complex human behavior is even possible. These attacks are geared to rebuttal the primary concern of the behaviorist for objectivity and verifiability.

(2) Anti-radical environmentalism and determinism. Cognitivists criticism in this category are geared to attack the later writing of Watson and Skinner's brand of behaviorism. In attacking Watson's (1925) "give me a dozen healthy infants...." statement rarely is the full quote given. Watson (1925, p. 273) concluded his famous challenge by saying: "I am going beyond my facts and I admit it, but so have the advocates of the contrary, and they have been doing it for thousands of years." In attacking Skinner's brand of behaviorism where the organism variable appear to be excluded, no mention of the neobehaviorism used of constructs is noted. This type of criticism leads to the next.

(3) The human is unique and separate. H.A. Simon (1980), a major hero of the cognitive movement and a Nobel Laureate in economics, maintains that behaviorists are preoccupied with positivistic and operational methodology primarily with the laboratory rat while humans engaged in complex thinking and problem-solving tasks. The issue here is twofold: (1) an attack is being made against behaviorism in terms of intellectual complexity and (2) an argument is being made for a noncumulative science - the human is unique. To say that S-R behaviorism has not dealt with complexity reflects considerable naivete and ignorance concerning the existing literature, characteristics all too common among cognitive psychologists. Watson addressed a number of complex human processes as did Skinner, Hull and Tolman. If you are looking for complexity by S-R behaviorists read N.E. Miller (1935) a stimulus-response analysis of "insight" and K.W. Spence (1937) S-R analysis of transposition (Amsel, 1989). The second attack is at the heart of this debate. Psychology in the last 100 years has generated an overwhelming support for the contention that basic laws exist across species including

the human and the science of psychology is cumulative as it is for other intellectual disciplines. The cognitive viewpoint on this subject is not only anti-science but indefensible requiring a redefinition of our field based on a humanistic philosophy.

(4) An attack within the laboratory on the role of behavior. The issue here is not a quarrel with objectivism although many cognitive researchers come very close to returning to introspective methods. The issue here, reflected in the writings of cognitive animal psychologists is best stated by Dickinson (1979), a leader in this area. He states: "... behavior is but a spade to disinter thought." "When the psychological community at large abandoned the behaviorist perspective, the traditional learning theory died a natural death." The disagreement between the behaviorist and these animal cognitivists, according to Amsel (1989) is that the former invent constructs to explain behavior, whereas the later behavior in itself is said to be unimportant except as a "window on the mind". This kind of argument ignores Tolman's brand of behaviorism which is rarely quoted by cognitivists and again redefines psychology as the study of the mind, a structuralist position. S-R learning theory, of course, is not dead and will not die until replaced by a better theory. Existing cognitive theories don't even represent a minor intellectual challenge, just an annoyance. The debate between Hull and Tolman was over the rigor of S-R versus cognitive theories, not over the definition of psychology as the study of behavior. Today the debate is precisely this, behavior versus mind and the survival of a scientific psychology.

(5) A weapon of propaganda. As Dinsmoor (1983) points out the word "cognitive" is used as a weapon of propaganda, with the implication that a person who adopts this label is abreast of the times and the rest of us, poor souls, are mired in the past. Dinsmoor goes on to state that this "buzzword" and its underlying philosophical effect is in danger of dismissing a vast store of experimentally derived information which is in danger of losing its archival value, at least for a generation of learning theorists. In the words of B.F. Skinner:

> Cognitive psychology is frequently presented as a revolt against behaviorism, but it is not a revolt, it is a retreat... Cognitive psychology is Old Home Week. We are back among friends speaking the language we spoke when we were growing up. We talk about love and will and ideas and memories and feelings and states of mind, and no one will raise an eyebrow (1984, pp. 949-950).

There are many historical reasons as to why the cognitive movement gains impetus and is being maintained today as the major influence in contemporary psychology. Time prevents me from detailing these reasons other than to note the dramatic shift in the quality and direction of graduate school training in the 1960s resulting from the large influx of students and proliferation of literature during this period. The love of the computer reflected in the catch-all term "information processing" as well as the work on "artificial intelligence" gave the new bred of psychologist a spurious sense of being modern. The historical and orderly accumulation of knowledge was not taught to students of that period nor is it today. As a result most modern day psychologists are grossly ignorant of the classic issues within the field and the cumulative bank of knowledge preceding the cognitive movement, and of the philosophy of science upon which the field had thrived and developed. As Amsel notes (1965, pp. 201-202) the cognitivist does not speak of demands, appetites, expectancies and readiness but rather of inputs, outputs and channel capacities. "Plans" have replaced cognitive maps and bits and chunks of information to be "processed" by the organism has replaced means-ends-readiness and sign Gestalt expectations.

The new cognitivists and structuralists are returning us to the S-R cognitive debate of some 50 years ago but with considerable less sophistication. We fought this battle once and won and will win again because the issues haven't changed. Osgood's (1953) argument to Tolman hold today for the "born-again" cognitivist.

> "Tolman has shown a magnificent lack of concern over the details of behaving. Having cognitions and demands, appropriate behaviors just appear spontaneously. As White (1943) puts it, 'Since their behavior is not necessarily a "response" to a "stimulus" it is called simply behavior... (p. 171). This lack of concern has certain advantages, chiefly that the important phenomenon of response equivalence can be accepted without explanation. It also has a serious disadvantage from the standpoint of theory, namely, that there is a gap in the inferential sequence which makes detailed predictions impassible... (p. 391).

As the philosopher of science Feigl (1953) states:

> This obvious standard of scientific method requires that the concepts in the formulation of scientific knowledge - claims to be as

> definitely delimited as possible. On the level of the qualitative classificatory sciences this amounts to the attempt to reduce all border-zone vagueness to a minimum. On the level of qualitative science the exactitude of the concepts is enormously enhanced through the application of the technique of measurement. (p. 12)

And as Skinner (1945) warns, "we must explicate an operational definition for every term unless we are willing to adopt the vague usage of the vernacular."

Cognitive psychology has not replaced learning S-R psychology with a better theory. These models are complex filled with vague untestable concepts and terms which lack predictive ability and violate the law of parsimony. They offer no new methodology or paradigms providing only an illusion of understanding. When placed in the form of a construct, the determination of whether or not the given cognitive construct is operating can only be surmised by changes in outcome relegating the concept to an unnecessary source of theoretical baggage. S-R neobehaviorism, on the other hand, defines it construct independently of outcome increasing testability, predictive power, and determining the details of the laws of behaving .

Furthermore, cognitive theories are notoriously devoid of incorporating a motivational component. This brings us back to the effects the cognitive movement has had on behavior therapy and the clinical field in general. Since Freud developed his theory of anxiety, clinical theories throughout the first part of this century, independent of orientation, had adopted the position that psychopathology is a learned emotional disorder affecting the autonomic nervous system. Clinical symptoms are viewed as avoidance behaviors designed to remove learned or conditioned anxiety. An overwhelming amount of clinical and research data exists which supports the above contentions. Even the neo-Freudians have changed their claim that insight is the therapeutic change agent to the necessity of producing emotional insight. Today most cognitive therapy and cognitive behavioral therapy represents little more than treatment sessions designed to enhance mental masturbation. To me the issue is not one of which of the currently 400 existing therapies is most effective but rather what lawful factors are responsible for developing, maintaining and eliminating psychopathology. Global cognitive theories are not in a position to isolate these factors and provide empirical tests. My own work on modifying the implosive procedure has resulted in me and others being able to decode from memory, in great detail, the traumatic events

motivating a given patient's pathology. I can assure you the clinical evidence obtained indicates that pathology occurs because of a series of unbelievable strong and horrifying conditioning events involving severe physical, sexual, and psychological pain. The recovery of memory is not modifiable by the therapist or subjected to suggestion or expectation effects. The recovery of such trauma does not change behavior. Behavior only changes when the emotion attached to the memory is substantially reduced. Conditioning sequences are involved and they directly affect the emotional system.

But my personal beliefs and reproducible clinical findings are not the issue of this debate. What is at stake is the development of an orderly accumulation of knowledge with theoretical models formulated in a precise and testable manner with the development of operational clinical procedures that can determine the behavioral change-agent. Systematic desensitization and implosive therapy are two approaches that meet this challenge. As Denny (1986) noted the S-R language of the behaviorist provides for an objective basis for the explanation of behavior, helps us avoid regression to a dualistic and mentalistic view of behavior, prevents the metaphorical and imprecise communication of the man-on-the-street, and reverse the fragmentation and lack of integration that results from the presence of two explanatory systems, one of which (cognitive) intrinsically lacks coherence.

To achieve the objective of determining the laws associated with psychopathology we must return to the foundation built by the founding fathers of behavior therapy. The foundation is still solid but the house has yet to be built. To achieve this objective we must return AABT to an association designed to advance behavior therapy, research and theory. We must change our journals, increase their standards and encourage the return of relevant infrahuman and human analogue studies, not to determine the effectiveness of treatment but rather to study basic processes in a controlled environment. We must stop the extensive use of misleading references, inaccurate references, misleading definition of the problem and critical omissions of relevant literature. We must encourage systematic parametric work and discourage package therapies which throw everything in but the kitchen sink preventing any discovery of what factors actually change behavior. We must operationalize our theoretical constructs and measure them independent of outcome to insure the boundary conditions of our procedures have been met. We must discourage those who join the association only to enhance their own careers or their bank accounts. Lastly and most

importantly we must readdress the training of our students to insure they receive substantial exposure to the S-R learning literature and the philosophy of science upon which it is historically based. Cognitive therapy and the cognitive movement as we know it today will die as all fads do for lack of substance. So will behavior therapy, as we know it today, unless the revolutionary goals originally outlined are executed. As Stampfl (1983) observed it is ironic that the growing dissatisfaction with a learning interpretation of clinical phenomena exists precisely at a time when marvelous opportunities for solidly based theoretical innovations to the human condition may readily be inferred from contemporary learning and conditioning literature. Let's make the revolution happen.

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